REMARKS

Claims 1-25 are pending in this application.

The Office Action maintains the rejection, under 35 U.S.C. § 103, of claims 1-4, 13-16, and 25 over Yamao et al. (U.S. Patent No. 6,351,498 B1) and Iwamura (U.S. Patent No. 5,742,620), claims 5-9, 11, 12, 17-21, 23, and 24 over Yamao et al., Iwamura, and Decrouez (U.S. Patent No. 5,701,332), and claims 10 and 22 over Yamao et al., Iwamura, and Mays et al. (U.S. Patent No. 5,278,870). These rejections are respectfully traversed.

Applicants maintain neither Yamao et al. nor Iwamura disclose generating a first set of bit metrics based on the energy values in response to the receiver being assigned to the first phase and a second set of bit metrics based on the energy values in response to the receiver being assigned to the second phase as recited in independent claim 1, and similarly recited in independent claims 13 and 25. Applicants also maintain the Office Action has not provided proper motivation to combine the references.

In the Response to Arguments section, the Office Action goes into great detail describing the transmitter of Yamao et al. The Office Action then only alleges the receiver performs the claimed features without providing any foundation for such allegations in the cited reference. The Office Action seems to imply that since the transmitter performs certain functions, the receiver allegedly performs the claimed function. Unfortunately, the Office Action does not provide a basis for this implication. In particular, the Office Action has not provided a basis for a receiver performing the specific features of the claimed invention. More particularly, in the previous response, Applicants asserted that there is no disclosure in Yamao et al. of generating a first set of bit metrics based on the energy values in response to the receiver being assigned to the first phase and a second set of bit metrics based on the energy values in response to the receiver being assigned to the second phase. However, the Office Action still has not provided any foundation in the reference of the claimed feature. If the claimed feature is actually stated in the reference, Applicants requests the actual disclosure of this feature. If no such disclosure exists, Applicants request withdrawal of the rejection.

Additionally, Applicants previously asserted Iwamura has no disclosure of any relationship between a GMD decoding apparatus and phase. In the Response to Arguments

section, the Office Action alleges Iwamura teaches bit metrics in GMS decoding. Thus, the Office Action appears to concede Iwamura has no disclosure of any relationship between a GMD decoding apparatus and phase.

Furthermore, Applicants previously asserted the Office Action has not provided proper motivation for combining the references. Unfortunately, the present Office Action still has not provided proper motivation for combining the references. In particular, the Office Action only cites sections of each reference that discuss the operation of the references. However, the Office Action does not provide any basis for actually combining the references. The Office Action only makes a conclusory remark that "The motivation and benefit are obvious." However, this is not a proper basis for motivation. In particular, there must be some suggestion or motivation, either in the reference or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings (MPEP 2142). The allegations of the Office Action only amount to a circular allegation of the combination being obvious because it is obvious. In fact, the present Office Action does not even attempt to address Applicants' specific assertions of the lack of motivation. Thus, the Office Action still has not provided proper motivation for combining the references.

The previous assertions are presented below for courtesy purposes.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the reference or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references, when combined, must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure (MPEP 2142). The prior art must suggest the desirability of the claimed invention (MPEP 2143.01).

Applicants assert neither Yamao et al. nor Iwamura disclose generating a first set of bit metrics based on the energy values in response to the receiver being assigned to the first phase and a second set of bit metrics based on the energy values in response to the receiver being

assigned to the second phase as recited in independent claim 1, and similarly recited in independent claims 13 and 25.

Yamao et al. discloses a digital modulation and demodulation scheme for radio communications involving fading (col. 3, lines 9-15). The Office Action alleges generating a first set of bit metrics based on the energy values in response to the receiver being assigned to the first phase and a second set of bit metrics based on the energy values in response to the receiver being assigned to the second phase is disclosed at Fig. 13 and col. 8, lines 28-60. Applicants disagree. Lines 28-60 expressly state "after received signals are filtered through band-pass filters BPF1 to BPF4 having central frequencies f1, f2, f3, and f4 respectively, four detector outputs are obtained and then 2 pits corresponding to a frequency for which the largest detector output is obtained are outputted as h1 and h2)." There is nothing present in the quoted portion of the cited section, or any of the remaining portions of the cited section, of doing anything in response to a receiver being assigned to a phase. The cited section only discusses band-pass filtering around central frequencies and outputting 2 bits corresponding to a frequency. None of the cited section nor the remaining sections of Yamao et al. disclose generating a first set of bit metrics based on the energy values in response to the receiver being assigned to the first phase and a second set of bit metrics based on the energy values in response to the receiver being assigned to the second phase.

Iwamura fails to make up for the deficiencies of Yamao et al. Iwamura discloses a Generalized Minimum Distance (GMD) decoding method and apparatus (col. 5, lines 12-25). Iwamura does not disclose generating a first set of bit metrics based on the energy values in response to the receiver being assigned to the first phase and a second set of bit metrics based on the energy values in response to the receiver being assigned to the second phase. In fact, Iwamura has absolutely no disclosure of any relationship between a GMD decoding apparatus and phase whatsoever.

Thus, neither Yamao et al. nor Iwamura disclose generating a first set of bit metrics based on the energy values in response to the receiver being assigned to the first phase and a second set of bit metrics based on the energy values in response to the receiver being assigned to the second phase as recited in independent claim 1, and similarly recited in independent claims 13 and 25.

Furthermore, the Office Action has not provided proper motivation for combining the references. The Office Action alleges motivation is based on "to have a more efficient decoding with less amount of parallel processing ability" and cites col. 5, lines 10-25 of Iwamura to support this allegation. However, this allegation does not provide motivation to combine the references. In particular, lines 10-25 only disclose the benefits of the disclosed GMD decoding method over a conventional GMD decoding method. Yet, Yamao et al. does not disclose the use of a GMD decoding method. Because, the only disclosed benefits of Iwamura relate to a GMD decoding method and because Yamao et al. does not utilize a GMD decoding method, there is no motivation to combine the teachings of Iwamura with Yamao et al. Thus, the Office Action has failed to establish a *prima facie* case of obviousness.

Therefore, Applicants respectfully submit that independent claims 1, 13, and 25 define patentable subject matter. The remaining claims depend from the independent claims and therefore also define patentable subject matter. Accordingly, Applicants respectfully request the withdrawal of the rejection under 35 U.S.C. § 103.

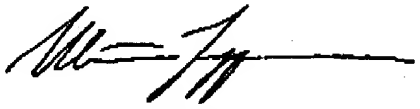
CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully submit this application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-25 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

The Commissioner is hereby authorized to deduct any fees arising as a result of this Amendment or any other communication from or to credit any overpayments to Deposit Account No. 50-2117.

Respectfully submitted,



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